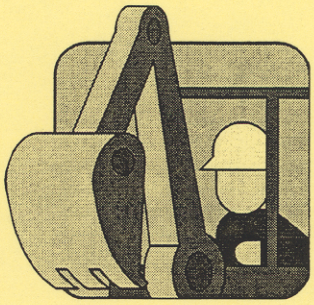
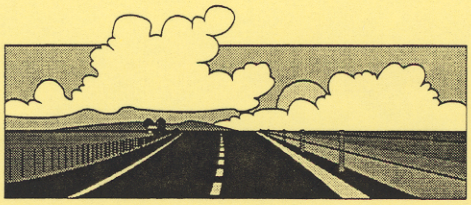
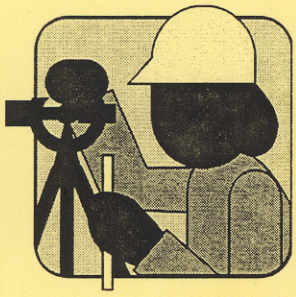
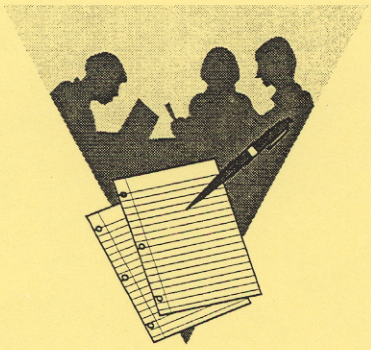
CONSTRUCTION ENGINEERING AND INSPECTION

INFORMATION PAMPHLET FOR CONSULTANTS









CONNECTICUT DEPARTMENT OF TRANSPORTATION
OFFICE OF CONSTRUCTION

~ January 2000 ~

INFORMATION PAMPHLET FOR CONSULTING ENGINEERS PERFORMING CONSTRUCTION ENGINEERING AND INSPECTION

INDEX

PURPOSE

This **pamphlet** is intended to clarify and amplify the related functions of the Department of Transportation and Consulting Engineers in carrying out the policies and procedures shown in the "Connecticut Department of Transportation, Bureau of Engineering and Highway Operation Manual of Organization, Function, and Procedures, Office of Construction," and other publications referred to in the agreement and this pamphlet. In case of conflict, the provisions of the pamphlet will take precedence over those of the Manual and other publications and the provisions of the agreement will take precedence over both.

SECTION I SCOPE OF WORK

The Consulting Engineer providing construction engineering and inspection services to the Department shall perform all work under the direct control of the State's **Project** Engineer. The Consulting Engineer shall provide sufficient qualified staff to continuously inspect each of the construction contractor's principal operations (e.g. grading, drainage, structure, pavement, vertical construction, rail work) in accordance with the Department's established procedures and practices. In addition, the Consulting Engineer shall organize his staff to provide the required administrative functions associated with the construction project including, but not limited to, correspondence preparation, construction orders, periodic payment estimates, quantity computations, material sampling and testing, E.E.O. and DBE monitoring, final documents, State and Federal reports, construction surveys, reviews and recommendations, claims analysis and other project-related functions as directed by the State's **Project** Engineer.

SECTION II PERSONNEL

A. QUALIFICATIONS – HIGHWAY, VERTICAL OR RAIL CONSTRUCTION:

The Consulting Engineer shall provide sufficient staff experienced in highway, vertical or rail construction practices and procedures to perform construction engineering and inspection services as directed by the State's **Project** Engineer. **ALL** inspection personnel, with the exception of entry level inspectors, employed by the Consulting Engineer, shall be certified by the National Institute of Certification of Engineering Technicians (NICET) at Level II or above or possess a Bachelor of Science Degree in Civil Engineering, Construction Technologies, or other related fields approved by the Department. Entry level inspectors who do not have a BS Degree must apply for NICET certification as soon as eligible.

* Note: Regarding the NICET Certification requirement, the Department may at its option conditionally accept an individual who does not have NICET Certification providing that person applies immediately for the required NICET Level and the Consulting Engineer obtains written authorization from the Office of Construction.

PROJECT MANAGER:

Not less than fifteen (15) years employment in civil or highway engineering of which at least six (6) years must have been in a supervisory capacity of **complex** highway and/or bridge construction activities, vertical or rail construction activities as required, and at least four (4) years of which will have been in field inspection activities. A Bachelor of Science Degree in Civil or Construction Engineering may be substituted for two (2) years of the general experience requirement.

The Project Manager will be responsible for coordination between the administering unit of the Department, consulting firm, and project staff to resolve problems concerning activities related to the project. Generally, one day per month will be permitted for this purpose unless written approval is obtained from the Office of Construction. **Only** activities directly relating to the project are reimbursable. Reimbursement will not be permitted for administration activities for the firm's personnel.

* Hours negotiated for Project Manager shall be limited to a **maximum** of 8 hours per month.

RESIDENT ENGINEER (Projects in excess of $15 Million):

Not less than ten (10) years employment in civil or highway engineering of which four (4) years must have been in a supervisory capacity of highway and/or bridge construction activities as required by the project, and at least two (2) years of which shall have been in field inspection activities. A Bachelor of Science Degree in Civil or Construction Engineering may be substituted for two (2) years of the general experience requirement. Individual must have considerable knowledge of highway and bridge construction practices and procedures, vertical or rail construction as required; ability to prepare correspondence, reports, and recommendations concerning construction problems; demonstrated ability to deal effectively with others; supervisory ability; ability to establish and maintain project records. Possession of a current Connecticut Professional Engineer's License is required.

CHIEF INSPECTOR/RESIDENT ENGINEER (Projects between $2.5 Million and $15 Million):

Not less than eight (8) years employment in civil or highway engineering of which four (4) years must have been in a supervisory capacity of highway and/or bridge construction activities, vertical or rail construction activities as required, and at least two (2) years of which shall have been in field inspection activities. A Bachelor of Science Degree in Civil or Construction Engineering may be substituted for two (2) years of the general experience requirement. An Associates Degree in a related field may be substituted for one (1) year of the general experience requirement. Individual must have considerable knowledge of highway and bridge construction practices and procedures, and vertical and rail construction as required; ability to prepare correspondence, reports, and recommendations concerning construction problems; demonstrated ability to deal effectively with others; supervisory ability to establish and maintain project records. Possession of a current Connecticut Professional Engineer's License, Engineer-in-Training Certification or NICET Level IV Certification in Transportation/Highway Construction is required.

CHIEF INSPECTOR (Projects under $2.5 Million):

Not less than (6) years employment in civil or highway engineering of which three (3) years must have been in a supervisory capacity of highway and/or bridge construction activities, vertical or rail construction activities as required; at least two (2) years of which shall have been in field inspection activities. A Bachelor of Science Degree in Civil or Construction Engineering may be substituted for two (2) years of the general experience requirement. An Associates Degree in a related field may be substituted for one (1) year of the general experience requirement. Individual must have considerable knowledge of highway and bridge construction practices and procedures, vertical or rail construction as required; ability to prepare correspondence, reports, and recommendations concerning construction problems; demonstrated ability to deal effectively with others; supervisory ability; ability to establish and maintain project records. Possession of an Engineer-in-Training Certification or NICET III Certification in Transportation/Highway Construction is required.

ASSISTANT CHIEF INSPECTOR (Projects over $10 Million):

Not less than six (6) years employment in civil or highway engineering of which at least two (2) years shall have been in a supervisory capacity of highway and bridge construction activities, vertical or rail construction activities as required, and two (2) years experience in field inspection activities. A Bachelor of Science Degree in Civil or Construction Engineering may be substituted for two (2) years of the general experience requirement. An Associates Degree in a related field may be substituted for one (1) year of the general experience requirement. Considerable knowledge of highway and bridge construction administration procedures; ability to deal effectively with others; supervisory ability; ability to establish and maintain project records and reports. Possession of Engineer-in-Training or NICET Level III Certification in Transportation/Highway Construction is required.

SENIOR INSPECTOR/OFFICE ENGINEER

Not less than four (4) years' employment in civil or highway engineering of which at least two (2) years shall be in field inspection activities. Considerable knowledge of construction materials, methods; ability to maintain field and office records; ability to perform complex quantity and engineering computations; ability to read and interpret plans and specifications; ability to deal effectively with people. Possession of an Engineer-in-Training or NICET III Certification in Transportation/Highway Construction is required.

INSPECTORS:

Not less than two (2) years employment in field inspection activities for civil or highway engineering. Considerable knowledge of construction materials, methods and procedures; ability to maintain field and office records; ability to perform complex quantity and engineering computations; ability to read and interpret plans and specifications; ability to deal effectively with people. NICET Level II Certification or Bachelor's Degree in Civil or Construction Engineering is required.

ENTRY LEVEL INSPECTOR:

Graduation from High School with mathematics/science background and one (1) year of related experience. A Bachelor of Science Degree in Civil or Construction Engineering or an Associates Degree in a related field may be substituted for the one (1) year experience requirement. Entry Level Inspectors who do not have a BS Degree in Civil Engineering must apply for NICET Certification as soon as eligible.

SURVEY PARTY CHIEF:

Not less than four (4) years of construction survey experience of which at least three (3) years shall have been as an instrument person or survey party chief. Considerable knowledge of principles and methods of land surveying; knowledge of principles and practices of highway engineering; ability to keep and reduce field notes; ability to determine construction quantities and amounts on completed projects; ability to supervise the layout of limits of work and grades, ability to check contractor's survey layout for accuracy; ability to make necessary foundations, rail track layouts, concrete abutments, culverts and pipe lines; ability to re-establish boundary lines and stake-taking lines for fencing; ability to prepare as-built plans and other related duties as required. The Survey Party Chief shall be currently licensed as a Land Surveyor in the State of Connecticut or shall be working under the direct supervision of a member of the Consulting Engineer's staff who is so licensed.

B. BRIDGE PAINTING – QUALIFICATIONS:

RESIDENT ENGINEER/CHIEF INSPECTOR:

Not less than eight (8) years experience in construction inspection of paint removal and application projects, of which four (4) years must have been in a supervisory and administrative capacity in field inspection activities related to coatings. NACE Certificated Coating Inspector (must have completed sessions I, II, III, and Peer Review), **and certification is required**. Individual must have considerable knowledge of highway and bridge construction practices and procedures; ability to prepare correspondence, ability to deal effectively with others; supervisory ability; ability to establish and maintain project records.

INSPECTION STAFF:

All inspection personnel are required to be currently certified as NACE Intermediate Coating Inspectors (must have completed sessions I, II, and III). Considerable knowledge of highway and bridge construction practices and procedures; materials and methods; coatings containment practices and procedures; lead monitoring; lead health and safety procedures; ability to prepare correspondence, reports, and recommendations concerning construction problems; demonstrated ability to deal effectively with others; supervisory ability; ability to establish and maintain project records.

C. GENERAL REQUIREMENTS:

SUBCONTRACTING:

The Consulting Engineer must perform the major part, at least seventy-five percent (75%) of the assignment with their own forces unless specifically authorized by the Office of Construction. Subconsultant assignments will be permitted up to twenty-five (25) percent of the value of the assignment. If specialized work is required which results in subcontract values in excess of twenty-five (25) percent of the agreement value, the prime consultant shall obtain written approval from the Construction Administrator for the additional subconsultant assignments. If the prime consultant determines that a portion of the assignment will be subcontracted, the prime shall make and document every "good faith" effort to provide an equitable opportunity for DBE consultants to compete.

The Department of Transportation is committed to an effective implementation of a DBE Program as defined in Title 49, Code of Federal Regulations, Part 26 and SBE Program as defined in the Connecticut General Statutes. Implementation of the DBE/SBE Program is accorded the same priority as compliance with all other legal obligations incurred by the Connecticut Department of Transportation in its financial assistance agreements with the U.S. Department of Transportation.

COMPUTER TRAINING:

The Department will provide individual training related to departmental computer software systems for key consultant staff and the consultant will be responsible for training other personnel on their staff. **The Department will not provide computer training for commercially available software that may be utilized in conjunction with the assignment (i.e., Windows, Excel, Word, Primavera, etc.). It is the consultant's responsibility to provide staff with the requisite computer skills and the cost of any such training is not reimbursable.**

AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) TRAFFIC CONTROL SUPERVISOR (TCS)

* Consulting Engineers performing construction engineering and inspection services on limited access expressway projects are required to have one (1) person **certified** under the American Traffic Safety Services Association (ATSSA) or other program acceptable to the Department as a Traffic Control Supervisor (TCS).

NEW ENGLAND TRANSPORTATION TECHNICIAN CERTIFICATION PROGRAM (NETTCP)

* The Department will require personnel utilized on construction engineering and inspection assignments that begin after January 1, 2000 to have been certified under the NETTCP program or under another acceptable program. Currently, the NETTCP certification program is the only program acceptable to the Department for meeting this requirement. The NETTCP certifications required on CONNDOT construction engineering and inspection assignments include Certified Concrete Technician (CCT) and HMA Paving Technician (HMAPT). For each assignment, the consultant will be required to provide a minimum of one CCT and one HMAPT (the same individual may possess both certifications). Concrete field tests and HMA field tests shall be performed by certified personnel only. Some projects may require additional certified personnel due to multi-shift operations or other testing needs.

For project assignments with no concrete items, the CCT requirement will be waived. Likewise, on projects with no HMA pavement installation, the HMAPT requirement will be waived.

D. PERSONNEL PROCEDURES:

1. Initial Assignments:

Prior to assignment of any personnel to the project, the Consulting Engineer shall submit the following information to the District Engineer for approval: Name, social security number, position, current and proposed rate of compensation, evidence of current NICET certification, or in the case of bridge painting - current NACE certification, and any other licenses or certifications which may be required along with a resume of background and experience. If the individual proposed does not possess NICET certification, evidence that the individual has applied for the next scheduled certification examination must be provided. In no case will any personnel be assigned to a project without **prior** written approval by the State. The State reserves the right to require the replacement of any employee found not qualified or suitable for the duties required of his/her position.

2. Overtime:

The Consulting Engineer shall obtain authorization, in writing, for any overtime performed on the project from the State's Project Engineer. Unless an emergency situation exists, the authorization shall be obtained prior to the overtime work being performed. If the situation develops where advance authorization cannot be obtained, the Consulting Engineer shall inform the Project Engineer of the need for the overtime as soon as practical after the fact.

Overtime is only worked when there is Essential Inspection or, in other words, something that cannot be inspected the next day. Examples of Essential Inspection include: Hot-Mix Asphalt production and paving, concrete pours, backfilling of trenches, pile driving, cost plus operations, inspection and testing of material which cannot be performed at a later date, environmentally sensitive operations, and/or any operation which interferes with traffic or has an impact on the traveling public. During overtime periods of essential inspection, the minimal staff required to cover the essential operations should be working overtime, not the whole crew assigned to the project or operation. It should be noted that many times one inspector will be able to cover multiple operations during the overtime period. Nonessential Inspection is inspection that can be done at a later time. This inspection is not authorized for overtime. Examples of Nonessential Inspection include: work that can be viewed or inspected without opening or removing subsequent work, nonessential work that is in a closed work area or off the open roadway, formwork, placing rebar, building catch basins/manholes, etc.

There may be times when the contractor is working during periods that would not be an inspector's normal work shift (i.e.: Saturday, Sunday, Holiday, etc.) and either essential or nonessential work is being performed. If only nonessential work is being done, then an inspector would be assigned to come in to cover the job for the minimum 4-hour call in. This minimum shift allows for the inspector to verify which operations are being performed. If there was essential work or both types of work being performed, then minimal inspection staff would be assigned for the essential work, but would also cover the nonessential work while on the job.

Administrative and survey work do not require overtime coverage, except in emergency cases or situations where it is more economical to complete the work than to return the following day. Individuals must receive prior approval of the responsible office supervisor, District Engineer or the Director of Research and Materials, who will consult with the Office of Construction if the circumstances are outside of the given policy guidelines.

* In general, overtime for Resident Engineer's **will not** be permitted unless the project has multi-shifts. In case of emergency **or** a multi-shift project, up to four hours per week may be allowed for the Resident Engineer. Advance approval from the State's Engineer is required for all overtime.

*** Shift Differential:**

The Consulting Engineer will be asked to provide the initiating unit with a copy of their company's policies and procedures at the project assignment meeting. No negotiations may take place until these policies and procedures have been received. Shift differential cannot be reimbursed unless it is a part of the Consulting Engineer's policies and procedures at the time of negotiations. A shift differential no greater than the amount currently allowed in the State's P4 Engineering Contract covering the period of July 1, 1997 through June 30, 2001, and subsequent P4 Engineering Contracts after that period will be reimbursed.

The State's P4 Engineering contract states, in part:

"A shift differential of sixty-five (65) cents per hour shall be paid to all employees whose regularly assigned shift of tour of duty begins after 2:00 P.M. or before 6:00 A.M., except that any employee whose salary is above the equivalent of salary Group 23, Step 7, shall not be eligible for such differential."

Shift differential may only be reimbursed if it has been negotiated and made a part of the original agreement unless anticipated construction schedules change. Shift differential could then be added in accordance with the aforementioned terms.

3. SALARY ADJUSTMENTS/PROMOTIONS:

Any adjustment to salaries after initial approval of an individual's rate shall be submitted to the District Engineer for approval. The submittal shall contain the following information: Employee name, social security number, job classification, current and proposed rate of pay, rate of pay and job classification one (1) year prior to the proposed increase, and effective date of the proposed increase.

The maximum amount an employee can receive as an annual salary adjustment shall not exceed the inflation rate in effect at the time the agreement was negotiated. In the case of a promotion of an individual on the Consulting Engineer's staff, justification of the promotion, and explanation of the additional duties to be performed will also be submitted to the District Engineer with the request for approval. The individual must meet the minimum requirements for the position to which they are being promoted. Promotions will only be recognized based on job classifications within the agreement.

In general, a salary increase based on a promotion shall not exceed the mean rate of pay of all of the consultant's employees in the position class the employee is promoted to. Consultants may request a higher increase in exceptional cases, but in no case will the salary exceed the maximum rate negotiated for the classification in the agreement.

Requests for approval of salary adjustments must be submitted at least 21 days prior to the effective date of the adjustment. Retroactive approval of salary rates **will not** be made and the effective date of any adjustment made without prior submission, shall be 21 days after submission of the request to the District Engineer.

The Department reserves the right to limit the amount of any increase based upon the Department's appraisal of an individual's performance. If the Department reduces the amount of the increase proposed by the Consulting Engineer, the reason for the reduction will be provided in writing to the Consulting Engineer.

E. PERSONNEL SAFETY:

The Consulting Engineer, at his own expense, shall provide his project staff with all necessary safety devices as required by State and Federal Regulations.

In addition, it is expected that the Consulting Engineer's staff comply with the Department's Policy Statement HWYS-35A (Headgear Policy), and HWYS-35B (Protective Footwear Policy) issued October 1, 1999; Construction Advisory 49-92 (Headgear Policy) issued December 30, 1992; Revised Guidelines for the Wearing of High Visibility Safety Vests, memo issued April 2, 1993; High Visibility Safety Vests, memo issued April 16, 1993, and Commissioner's Administrative No. 25 issued July 6, 1982. Copies of these documents are included at the rear of this pamphlet.

*** Note: All practices must be in compliance with current State and Federal OSHA requirements.**

SECTION III PROJECT STAFFING

The Consulting Engineer shall provide sufficient staff to properly inspect the contractor's operation. The staff size and qualifications shall be approved by the District Engineer and the Consulting Engineer shall modify the size of the on-site staff as required by the construction contractor's operations and schedules with approval of the District Engineer.

The Consulting Engineer's staff shall report to and accept and fulfill all orders, directives, and interpretations of the plans, specifications and special provisions as given by the State's Project Engineer. The State's Project Engineer will work under the supervision of the Transportation Supervising Engineer assigned to the project, who in turn will be supervised by the Assistant District Engineer. The District Engineer has overall responsibility for the work.

The Consulting Engineer shall provide a fully qualified Resident Engineer/Chief Inspector to supervise the Consulting Engineer's project organization in their administration and inspection of the work. Depending on project size and complexity, the Resident Engineer/Chief Inspector shall have under his/her supervision an inspection staff sufficient to continuously monitor the contractor's principal operations and to perform the administrative tasks associated with the construction project. On smaller projects, survey work will be performed by District personnel whenever possible. On projects which require a substantial effort (general guide - projects greater than $10,000,000) survey services may be provided by the prime consultant or a subconsultant. Also, on smaller projects, various responsibilities may be combined under one classification (i.e., Office Engineer/Inspector) to economically provide the required service.

The Consulting Engineer shall also provide full or part-time clerical and administrative staff to promptly handle the preparation of all correspondence, construction orders, payment estimates, reports and project-related State and Federal forms. However, on small projects (general guide - projects under $10,000,000), clerical work **may** be performed by District Personnel whenever possible.

If at any time it is determined that the Consulting Engineer's project staff is inappropriate for the work being performed, the Project Engineer shall direct the Consulting Engineer to make appropriate adjustments to the staff.

* During project shutdown periods, the Consulting Engineer is responsible for making certain that the project is appropriately staffed. On December 1 of each year of the agreement, the consultant shall provide a schedule of work and personnel assignments to the initiating unit in order to verify that sufficient work exists to support the level of staffing proposed by the Consulting Engineering during the project shutdown period. **Reduction of staff during the winter period may be required depending on the project status and work to be performed.**

SECTION IV CONSULTING ENGINEER'S RESPONSIBILITIES

The Consulting Engineer's Resident Engineer/Chief Inspector shall be responsible for the overall administration and construction inspection supervision of the project. The Chief Inspector shall ensure the inspection staff is thoroughly familiar with the plans and specifications for the work. The Consulting Engineer shall also ensure his staff properly documents the work performed in accordance with the Department's record keeping procedures.

The Consulting Engineer shall work under the general supervision and direct control of the State's assigned Project Engineer. The Consulting Engineer shall perform all tasks, functions and operations described in the Department's "Construction Manual" including, but not limited to:

a) INSPECTION OF CONTRACT WORK

The Consulting Engineer shall inspect all construction within project limits to ensure that the work conforms with the project plans and specifications. He/she shall monitor and document all work performed by public utility companies, railroads and governmental agencies within the project limits or for work being billed to the project. The Consulting Engineer's staff shall become thoroughly familiar with the plans. They shall perform measurements necessary for periodic payments to the contractor and shall document the contractor's daily operations in accordance with established Department procedures.

b) CONSTRUCTION SURVEY

The Consulting Engineer shall perform all construction survey work, if required, and negotiated as part of the agreement, with the exception of that included in the construction contract to be done by the Contractor. He shall check layout staking performed by the contractor; perform survey work and measurements required for determination of quantities (cross sections of earth, rock structure, excavation, etc.); survey required for as-built plans; surveying and construction staking for the accurate installation of fencing; and other project-related survey work as directed by the Project Engineer.

c) MATERIALS TESTING

The Consulting Engineer shall sample all materials to be incorporated into the work as required by the State's material testing requirements. Sampling shall be performed in a timely manner so that materials can be tested prior to use. The Consulting Engineer shall prepare the Requests for Material Test (MAT-1) and shall maintain the testing logs in the project records. All sampling and field testing shall be performed in accordance with established DOT procedures.

* For all assignments that begin after January 1, 2000, New England Transportation Technician Certifications (NETTCP) will be required on CONNDOT construction engineering and inspection assignments for a Certified Concrete Technician (CCT) and HMA Paving Technician (HMAPT). For each assignment, the consultant will be required to provide a minimum of one CCT and one HMAPT (the same individual may possess both certifications). Concrete field tests and HMA field tests shall be performed by certified personnel only. Some projects may require additional certified personnel due to multi-shift operations or other testing needs.

* Only certified consultant personnel shall perform nuclear density tests. Nuclear density equipment shall be provided by the Consulting Engineer and will be covered under burden, fringe and overhead. If the consultant does not possess the in-house capability to perform nuclear density testing, the Department will define what will be required in order to have an outside agency perform this task.

d) PROJECT RECORDS

The Consulting Engineer shall perform all administrative functions associated with the project to include:

1. Establish and maintain project quantity records.

2. Establish and maintain project daily reports (CON-2) and inspector's daily reports.

3. Review and monitor contractor E.E.O., MBE and training compliance; prepare associated periodic reports; notify Project Engineer of deficiencies and problems.

4. Preparation of Construction Orders; Semi-monthly and monthly estimates.

5. Preparation of Cost Plus Records; Utility Work Records (CON 40 and 41).

6. Timely preparation of correspondence, memorandums and reports. Turnaround time should be within five (5) working days of receipt unless substantial investigation and/or review is required.

7. Review, analysis and recommendations for contractor claims, proposals, extra work, time extensions, etc.

8. Establish and maintain shop drawing file.

9. Preparation of periodic reports and forms as required by the Department.

10. Record minutes and prepare reports of all project-related meetings, within three (3) days of the meeting, for approval by the Department's Project Engineer.

11. Prepare project final documents (final estimate, construction order, as-built plans, construction report and other related final documents).

* A Professional Engineer on the Consulting Engineer's staff may be requested to prepare designs. This work would be performed under an extra work claim.

12. Other project–related administrative functions as required by the Construction Manual and the Project Engineer.

e) TRAFFIC CONTROL

The Consulting Engineer shall monitor contractor compliance with the Maintenance and Protection, Limitation of Operations and Traffic Control sections of the plans and specifications and shall promptly report any corrective actions necessary to the Contractor. In the event that the contractor fails to rectify the situation, the Consulting Engineer shall notify the Project Engineer and/or District Office immediately.

f) COORDINATION AND LIAISON

The Consulting Engineer shall assist in the coordination and liaison between all parties affected by the project. He/she shall conduct coordination and progress meeting as required, establish and maintain liaison with the State Agencies, Municipalities, Utilities and Contractor affected by the work.

g) PLAN REVIEW

The Consulting Engineer shall review the construction plans and notify the Project Engineer of potential problems as soon as they are noted. He/she shall review alternatives and recommend solutions to construction problems as requested by the Project Engineer.

h) ENVIRONMENTAL MONITORING

The Consulting Engineer shall be aware of the environmental concerns related to the project and shall monitor contractor compliance with the environmental controls and report to the Project Engineer if deemed necessary. It shall be the Consulting Engineer's responsibility to prepare all reports required by environmental permits, or Department procedures (i.e., project site environmental inspection report).

In addition to the items detailed above, the Consulting Engineer shall perform all duties and tasks outlined for inspectors in the Department's "Construction Manual". The Consulting Engineer's staff shall also perform any other special tasks related to the construction contract as directed by the Department's Project Engineer.

SECTION V ADMINISTRATIVE DETAILS

A. EQUIPMENT PROCUREMENT

Prior to purchasing any equipment, which has been authorized by an agreement, supplement, or extra work claim, and charged as a direct cost to the State, the Consulting Engineer shall obtain written approval for the purchase. For equipment costing in excess of $600.00, the Consulting Engineer shall obtain cost proposals from at least three (3) suppliers and submit the proposals and equipment catalog cuts for approval. All purchased equipment shall be maintained in good condition and shall be turned over to the State upon completion of the construction projects.

B. EMPLOYEE MILEAGE/LODGING/SUBSISTENCE

Employee travel expenses will be limited to on project mileage and mileage to attend project-related meetings off site. All other travel/lodging/subsistence expenses will **only** be reimbursed with prior approval from the Department and as negotiated. Subsistence and lodging rates, when negotiated and approved by the Department, shall not exceed the rates currently in effect for State Manager's under State Travel Regulations.

* In addition, if any employees have company vehicles assigned for use on the project, reimbursement for mileage will be allowed only if the vehicle is not normally charged to the company's overhead. Reimbursement shall be made only for the percentage of on job and project-related use. The Consulting Engineer shall provide a monthly accounting of job related mileage, commutation mileage and other mileage usage and compute the proportional share of mileage to be charged as a direct cost in accordance with the Standard State Travel Regulations – State Managers as specified in the agreement. This accounting shall be submitted with the CLA-3.

Lodging and subsistence will not be allowed as a direct cost unless specifically negotiated and listed in the agreement or supplemental agreement , and only with prior approval from the State's Engineer. Subsistence and lodging rates when approved shall not exceed the rates currently in effect for State Manager under State Travel Regulations.

C. BILLING PROCEDURES

In accordance with the Consulting Engineer's agreement, he/she shall submit on a **monthly** basis a certified payroll, in effect at the time of the invoicing, and request for payment (CLA-3 form provided by the State).

The CLA-3 and supporting documents must be submitted monthly in accordance with the "Pamphlet for Monitoring Performance and Payment Requests for Consultants". Delays in submission and combining several months in one submission severely impacts the review and approval of the invoice and causes delay in payment.

When the CLA-3 is submitted, the Consulting Engineer should ensure legible copies of all substantiating data are included. Examples of required supporting data include:

Copies of Invoices and Receipts for Direct Cost Material Purchased

Substantiation of Mileage Claimed and Paid

Certified Payroll in Effect at Time of Invoicing

Record of Daily Hours Worked by Each Employee

Copy of Project Engineers' Overtime Approval

Copy of Invoices for Subsistence, Lodging, etc. (when authorized by agreement)

Appropriate Backup for Telephone Calls

Any CLA-3 submitted with insufficient information, illegible copies of substantiating data or errors shall be returned to the Consulting Engineering for correction. Corrections should be made promptly so that the error does not carry over to future invoices.

Consultant's final invoice (CLA-3) shall be for release of retainage. This invoice will be held pending final audit release.

Note: At the completion of the project, the Consulting Engineer will be required to provide documentation confirming that all of their subcontractors have been paid.

Documentation of "Good Faith" efforts and amounts completed of the DBE/SBE Program, if any, will be required to be submitted with the final invoice.

D. CONSULTANT PERFORMANCE REVIEWS

The Department will perform bi-monthly evaluations of Consulting Engineer's performance for the following periods: January 1 – February 28, March 1 – April 30, May 1 – June 30, July 1 – August 31, September 1 – October 31, and November 1 – December 31. A copy of the bi-monthly evaluation will be provided to the consultant's Resident Engineer/Chief Inspector. It is expected that the Resident Engineer/Chief Inspector will keep the consultant's Project Manager informed of all evaluations received.

Semi-annual consultant performance evaluation ratings shall be done for the following periods: January 1 through June 31 and July 1 through December 31. These ratings will be based on the results of the bi-monthly evaluations prepared for each Consulting Engineer prior to the semi-annual evaluation. A copy of the semi-annual evaluation will be sent to the consultant's designated project manager.

Performance reviews may be conducted more frequently if determined necessary by the District.

When evaluations indicate improvement is needed or if the consultant wishes to discuss the evaluation, they should contact the Project Engineer and arrange a meeting. These evaluations are used by the Consultant Selection Panel when evaluating firms for future project selections. Failure to take corrective action when necessary could prevent the Consultant from being assigned future projects.

SECTION VI APPLICABLE PUBLICATIONS GOVERNING THE WORK

The following is a listing of applicable publications which the Consulting Engineer should have available at all times at the project office. The Consulting Engineer's Chief Inspector/Resident Engineer shall ensure all personnel are familiar with the applicable sections of the publications involving the work being performed.

1. Personal Services Agreement for Project
2. Connecticut Department of Transportation Construction Manual
3. Contract Plans and Specifications
4. Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction
5. Information Pamphlet for Consulting Engineers Performing Construction Inspection
6. Schedule of Minimum Requirements for Sampling Materials for Test
7. Copies of all Safety Policy Statements and Memoranda Attached to this Pamphlet
8. All Other Publications Provided to the Consulting Engineer by the District
9. Pamphlet for Monitoring Performance and Payment Requests for Consultants
10. Direct Cost Guide for Consulting Engineers Performing Construction Engineering and Inspection

a:\engineer requirements

DIRECT COST GUIDE ON CONSULTANT AGREEMENTS

3/23/99

ALLOWABLE DIRECT COSTS	UNALLOWABLE DIRECT COSTS
1. TOLL CALLS	1. TOOLS OF TRADE (HAMMERS, LADDERS, PEGS, PLUMBOBS, ETC.)
2. CADD SYSTEMS	2. MISCELLANEOUS OFFICE SUPPLIES
3. SUBSISTENCE (IF APPLICABLE)	3. NUCLEAR DENSITY EQUIPMENT
4. TRANSPORTATION (PROJECT RELATED)	4. RADIOS & COMMUNICATIONS SYSTEMS
5. COMPUTER (TIME SHARING)	5. BEEPERS
6. REPRODUCTIONS, DEVELOPING & FILM	6. SURVEY EQUIPMENT
7. PERSONNEL RELOCATION	7. OFFICE FURNITURE & EQUIPMENT (TYPEWRITERS, ETC.)
8. OUTSIDE TESTING SERVICES	8. COPIERS
9. SPECIAL EQUIPMENT RENTAL (NOT TOOLS OF TRADE)	9. PERSONAL COMPUTERS
10. CELLULAR TELEPHONE CHARGES – ONLY EMERGENCY JOB-RELATED CALLS WILL BE COVERED. THE ACTUAL CHARGE FOR THE CALL – NOT THE RENTAL OR FLAT FEE. BILLING RECEIPTS WILL BE REQUIRED.	10. TELEPHONE BILLS
	11. ELECTRIC BILLS
	12. CAMERAS
	13. VEHICLE RENTAL OR PURCHASE
	14. BINOCULARS
	15. LABORATORY & FIELD EQUIPMENT
	16. HARD HATS
	17. SAFETY VESTS
	18. PROTECTIVE CLOTHING
	19. BRIDGE INSPECTION EQUIPMENT
	20. VEHICLE INSURANCE
	21. VEHICLE REGISTRATION
	22. VEHICLE PROPERTY TAXES
	23. VEHICLE MAINTENANCE
	24. OIL & GAS
	25. OFFICE RENTAL
	26. TRAINING
	27. REQUIRED CERTIFICATION FEES

CONNECTICUT DEPARTMENT OF TRANSPORTATION

POLICY STATEMENT

POLICY NO. HWYS-35A
October 1, 1999

SUBJECT: Headgear Policy

Department employees performing certain tasks are required to wear protective, high-visibility headgear for personal safety in accordance with the following:

- Department-issued hard hats are required to be worn in compliance with OSHA Safety Standards and during Department-selected work activities as specified and directed by unit supervisors. During all other fieldwork activities, Department-issued soft caps are required to be worn.

- Employees may remove headgear when they are within fully enclosed vehicles normally driven over the road, such as passenger cars and pickup/dump trucks. Headgear must be worn when employees are stationed on vehicular equipment such as tractors, mowers, and payloaders, even if fully enclosed.

- Headgear will be worn in accordance with guidelines as noted in Safety Topic #35 and based on the type of work activities each unit performs. These guidelines must be utilized for this Policy to be effective.

- In areas not addressed by unit guidelines, the responsibility to wear the proper headgear lies with the individual employee. As with any safety-related policy, common sense and good judgement must rule.

Department supervisors will strictly enforce this Policy with noncompliance resulting in progressive disciplinary action.

(This Policy Statement supersedes Policy Statement No. HWYS-35A dated October 23, 1992).

James F. Sullivan
Commissioner

CONNECTICUT DEPARTMENT OF TRANSPORTATION

POLICY STATEMENT

POLICY NO. HWYS-35B
October 1, 1999

SUBJECT: Policy on Protective Footwear
(Steel Toe Shoes)

The Department, in order to insure the safety of all personnel under its jurisdiction, requires that those persons engaged in construction, surveys, bridge/field inspections, or general maintenance field activities wear protective footwear at all times when on the job.

Whenever it becomes necessary for other Department personnel to go into an area where protective footwear is required, such personnel shall also comply with this Policy.

Department supervisors will strictly enforce this Policy with noncompliance resulting in progressive disciplinary action.

(This Policy Statement supersedes Policy Statement No. HWYS-35B dated October 23, 1992).

James F. Sullivan
Commissioner

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

memorandum

COM-09A REV. 2/91 Printed on Recycled or Recovered Paper

subject Construction Advisory 49-92
Headgear Policy

date December 30, 1992

to
Messrs. Leon M. Alford - District I
Michael E. Lavallee - District II
Joseph DeMarco - District III
Wayne W. Blair - District IV

from L. Brian Castler *ext.* CASTLER
L. Brian Castler
Manager of Construction Operations
Bureau of Engineering and
Highway Operations

It is the policy of the Office of Construction that Inspectors and survey personnel wear protective Headgear (hard hats) while on any active construction project. An active construction project is any project where the contractor is actually working on the site, or when in areas where there is a possible danger of head injury from impact, from falling or flying objects. For Office of Construction field operations other than active construction projects, personnel have the option of wearing either a hard hat or department issued soft cap.

It shall be the supervisor's responsibility to ensure that personnel under their supervision comply with this policy and wear headgear at all times while engaged in field operations.

Stores Item 303-03-0024 - Cap, Baseball, Neon Orange (Team D.O.T.).

L. Brian Castler/km

cc: Dep. Comr. James F. Sullivan-James F. Byrnes, Jr.
Arthur W. Gruhn-L. Brian Castler
Fred Monteleone
Dennis J. Purcell
Charles Panteleakos
Paul H. Breen
Peter L. Curcio
Robbin L. Cabelus
Robert P. Pettinicchi
William A. Colacrai
Edward R. Karpiej-George Bagdasarian
Central Files - Unit 501

de's-7 (pg 17)

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

memorandum

COM-09A REV. 2/91 Printed on Recycled or Recovered Paper

subject High Visibility Safety Vests

date April 16, 1993

to Messrs. Leon M. Alford - District I
Michael E. Lavallee - District II
Joseph DeMarco - District III
Wayne W. Blair - District IV
John R. Puglisi - Central Surveys
Charles E. Dougan - Research & Materials

from Arthur W. Gruhn, P.E.
Director of Construction
Bureau of Engineering and
Highway Operations

ext.

Attached, you will find a copy of a memorandum from John P. McGill, Director of Safety, regarding the wearing of safety vests.

While this memorandum specifically mentions maintenance workers, virtually all construction and survey projects undertaken by the Department expose our inspection forces to vehicular hazards (both general traffic and construction traffic) during the workday. All construction inspection and survey personnel are, therefore, also required to wear high visibility safety vests at all times on construction projects. Likewise, personnel from the Office of Research and Materials who perform work within highway limits or on construction projects must also wear safety vests.

Please disseminate this policy to your employees, ensure all personnel are issued safety vests, and monitor compliance of this important safety requirement. Where necessary, appropriate disciplinary action should be taken.

Arthur W. Gruhn/km

cc: Dep. Comr. James F. Sullivan
James F. Byrnes, Jr.
Arthur W. Gruhn-L. Brian Castler
John P. McGill

de's-8 (pg 32)

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

memorandum

COM-09A REV. 2/91 Printed on Recycled or Recovered Paper

subject Revised Guidelines for the Wearing of High Visibility Safety Vests

date April 2, 1993

to ALL CONCERNED

from John P. McGill
Director of Safety
Bureau of Finance
and Administration

ext.

The wearing of safety vests is required by OSHA under the provisions of the General Duty Clauses. In order to provide a greater margin of safety and improve the visibility of our work force, the Department of Transportation's policy on wearing safety vests is modified to conform with OSHA regulations.

Safety vests are now required to be worn at all times when a worker may be exposed to traffic or moving equipment. This means that when a Maintenance worker exits his/her vehicle, he/she must be wearing the vest. Additionally, all employees working on railroad rights-of-way shall wear the safety vest.

The following are the only approved exceptions to the Safety Vest Policy:

1. When the vest presents a hazard of snagging or catching as in tree climbing, aerial bucket work or when feeding a wood chipper.
2. When inside of vehicles.
3. When inside of buildings

Any questions regarding the proper interpretation of this policy may be directed to the DOT Safety Division. This policy supersedes the previous safety vest requirements as outlined in the "Guidelines for Safe Practices" handbook. The cooperation and compliance of all affected employees is expected and appreciated. Disciplinary action will be issued for violation of this policy.

LIST #5

STATE OF CONNECTICUT

DEPARTMENT OF TRANSPORTATION

July 6, 1982

ADMINISTRATIVE MEMORANDUM NO. 25

SUBJECT: Hard Hat Policy

Since assuming the duties of Commissioner, I have been aware of the long-standing Hard Hat Policy issued by the Maintenance Division.

In order to insure safety and uniformity throughout the rest of the Department, effective immediately all Department of Transportation personnel engaged in construction, surveys or general maintenance field activities will wear protective headgear at all times when on the job, except under the following conditions:

1. It will not be necessary to wear head protection when in buildings unless there is construction in the immediate area.

2. When riding in automobiles or cabs of trucks.

3. When a tree climber is engaged in work that cannot be done from the bucket of the bucket truck and he must physically climb the tree in order to carry out the operation.

All other Department of Transportation personnel shall comply with protective headgear rules when going into an area where the protection is required. Non-compliance with this memorandum will result in disciplinary action which may include written warnings, suspensions, and even more severe disciplinary penalties. This policy will be strictly enforced, and supervisors and others in the chain of command will be held accountable for compliance with this Department-wide requirement.

This policy may be revised and/or extended to include additional groups of employees as the need arises.

J. William Burns
Commissioner

LIST #5